

Historical Article

Falcon Field Beginnings **AAHS Journal** **American Aviation Historical Society** **Volume 30, Number 3, Fall 1985, Page 175**

In 1940 the British were in serious trouble with regard to training new pilots. They didn't have enough fields which were suitable, enough airplanes or enough fuel to mount the huge training program necessary to maintain the continued strength of the RAF. In addition to this, English weather was definitely not conducive to an efficient training program.

In order to solve this dilemma, the "Empire Air Training Scheme" was devised. This was a plan whereby young Britons were sent overseas to receive their primary and advance flight training. Originally it was to have included Canada, South Africa and Rhodesia. After negotiations with the American government, the plan was then expanded to include the United States.

Squadron Leader Stuart Mills was chosen to come to the United States and help set up fields for the projected training program. The U.S. was to have six fields, one of which was tentatively planned to be in Mesa, Arizona.

Mills had just returned from the disastrous Battle of Norway. His squadron of Gloster Gladiators had been operating from a frozen lake, and he had been wounded. All aircraft of the squadron had been left behind. Mills did not know at the time why he was being sent to the U.S. or why he had been chosen. All he knew was to report to the British Embassy in Washington, D.C.

He boarded the troop ship EMPRESS OF BRITAIN of the Canadian-Pacific Steamship Line late in 1940. Once aboard ship, he was assigned to the honeymoon suite, which he shared with a British radar expert. Their quarters were cramped and on top of that, the room was filled with crates that ultimately ended up on a mountaintop in Hawaii (Radar).

The trip was uneventful and Mills was still mystified about his assignment when he arrived in Washington, D.C., from Halifax, Nova Scotia. He was even more perplexed when he was invited to the White House for tea with the Roosevelts. They questioned him closely about the war in Europe and especially his experiences in Norway.

A short time later he was apprised of the purpose of his posting to Washington. He was to help pick fields and supervise the training of British airmen in the United States. Mills headed for the West Coast. Fields were to be established in Lancaster, Calif: Los Angeles: Mesa, Arizona: Texas: Oklahoma: and Florida. Mills' primary responsibility was to be the establishment and operation of a field in Arizona.

On his arrival at Phoenix Sky Harbor Airport he was met by Jack Connelly, Leland Hayward and Al Storrs (later to be director of training at Falcon Field). They immediately headed out for the proposed location of the field. They drove for miles down a long dusty road. En route to the site, Mills was surprised to see an Indian on a horse pulling a baby on two poles that dragged along behind. Running alongside was his squaw.

"My God," gulped Mills, a "a red indian!" The others looked at him amusedly. It was a common sight to them.

They finally arrived at the site of the field. It was just desert. To the west was a huge orange grove and there was a rise in the ground level on that side. North of the field was a huge flat-topped mountain.

"The orange grove will have to be moved back," Mills remarked, "and that high ground will have to be leveled." The others looked at him aghast. Southwest was really hard pressed for money at the time and Mills' suggestions sounded like more money than they had available.

Mills smiled at him and said with a twinkle in his eye, " I don't think we'll have to move the mountain, though." As things turned out, the grove wasn't moved (it is still there today), the high ground wasn't leveled and the mountain wasn't moved. Mainly, the aforementioned improvements were not accomplished, probably due to the company's difficult financial posture at that time.

Mills was quite doubtful of Southwest's ability to deliver. He felt they had no experience operating "Harvards," not much background in running a big training base (Thunderbird was still new) and not enough money to back up the operation. Despite these shortcomings, Mills agreed, due, among other things, to the Arizona weather and the shortness of time. The weather, which was ideal for flying, was to be a very important factor in the success of the Arizona training operation.

Jack Connelly planned to name the airfield "Thunderbird II" but the British balked. They didn't know what the strange sounding "Thunderbird" was, and furthermore, wanted something more familiar. The Falcon was an English bird and they insisted on using it. Connelly acquiesced reluctantly and thus Falcon Field was born.

Construction was started soon after and flying operations began among much confusion and disarray on September 14, 1941. The airfield, barracks and all facilities were in very primitive shape, as Thunderbird had been earlier in the year when operations began.

H. Dean Page, a navigation instructor, remembers what those first difficult days were like in an article he wrote for the Thunderbird house organ: "We all developed into habitual milk drinkers ... with good reason. It was the only thing we could get. The plumbers were continually testing the water mains. At the most, you could expect a light orange dribble out of the faucets, and ordinarily all you could get would be a momentary gurgle, followed by a dry discouraging hiss."

The British cadets operated under extremely rough conditions, holding classes in the barracks, sitting on barrels and boxes or on the floor as carpenters and electricians worked around them. On the flight line man-made dust storms were again the order of the day with the flight dispatcher sitting on a keg or box with a clipboard in his lap and eating dust all day while airplanes competed with graders and steamrollers.

Marvin Meier remembers those first days well. As previously mentioned, he had started at Thunderbird I as a novice mechanic and then had been transferred with the maintenance cadre to the new field. "We moved in as the carpenters were moving out. Scrap lumber piles were everywhere and then there were the crickets..." Meier's voice still has a note of disbelief as he recalls those days. "I didn't believe there could be so many crickets. We worked at night with the hangar doors open and the lights could be seen for miles. It drew them in from the desert for miles around. They piled up in the corners of the hangar four or five inches deep. We were continually sweeping or shoveling them out."

He also saw the biggest rattler he'd ever seen just 200 feet from the hangar. The desert was reluctant to give up what it considered to be its own. The following year things were quite different. No snakes and very few crickets.

Most of the maintenance was performed at night, with swing shift starting around 5:00 p.m. A good part of the maintenance crews were women, about 60 percent. The same endless chores of valve adjusting, plug changing, oil, brakes, tires and repairing damage took place night after night.

Many women were utilized as specialists in the nightly maintenance program. It was found that a woman who had never seen an airplane before could be trained to perform one specific job on the airplane. For instance, one would clean and grease all the tail wheel bearings and tail gear throw-out clutches. Another would go from one aircraft to the next removing the "air maze" filter, cleaning, oiling, then reinstalling it. Still another removed the plates, cleaned and oiled the landing gear down-lock latches on the AT-6. It was no real problem to take a woman out of the cotton fields or kitchen and teach her to do one specific thing every night. That's all she did and all it required was someone to come along behind to check the safetying, etc. It really worked quite efficiently. By morning all the aircraft were repaired, washed, oiled, fueled and ready for another day of flying.

Maintenance boss at Falcon was Joseph Wischler who is still involved in Phoenix aviation. He had been hired out of Chicago and was one of the few licensed mechanics the company had in the beginning. After a few months he found himself as Supervisor of Maintenance at Falcon Field. Things in aviation had been tough in Chicago and Wischler was glad to be part of an expanding organization.

"Those were hectic times. Lots of overtime was being worked as Falcon's complement of 40 PT-17s, 40 BT-13s and 40 AT-6s were made ready. Everyone believed war was

coming. The British appreciated good maintenance and we worked hard to give them a good, clean airplane."

However, the British were not happy with the American system of primary, basic and advanced flight training. They did not believe that the basic segment was really necessary and they did not like the Vultee BT-13 aircraft very much.

Among other things, they thought it was hard to maintain and had some structural flaws which had to be corrected. In the few courses (classes) in which the Vultrees were used, half the fleet was grounded with stabilizer cracks and much time was used in complying with modifications to the structure. After several classes, the basic training segment was eliminated and British cadets went directly from PTs to ATs.

Other important things differed in the British syllabus from that of the Army Air Force curriculum. One was night flying operations. They were a part of the primary flight segment. Solo night landings by the light of a 450 by 100 yard flarepath was required at the halfway point in primary. Night flying operations were started at Thunderbird Field which the British used for the first three or four courses until Falcon was completed. The runway chosen would be watered down by trucks to settle the dust and then the flare pots were set in place. As the dust dried out it would have to be rewatered. At Thunderbird all night flying was dual and consisted of circuits and landings only. Three-hundred-mile cross-country night flights were required in advanced training.

Practice in many flying maneuvers which were required by the Army Air Force was eliminated as superfluous by the British. Among these were chandelles, lazy 8s, pylon 8s and others. Instrument flying, formation flying and night navigation, which was not part of the AAF primary program, were part of British primary training. The Air Force was impressed with the British system and philosophy of flight training, so much so that several classes of American cadets were sent to Falcon to receive training along with the Britons. The experiment worked out quite well with the Americans. Upon graduation they received not only AAF but RAF wings as well. The dual program was operated from courses 13 through 19.

The British students had gone through a lot and come a long way to be where they were ... taking flight training in Arizona. It all started in England where about 1500 potential cadets were being called up weekly. Those who were chosen would be trained in Canada, South Africa, Rhodesia or one of six different fields in the United States as previously mentioned. After physicals and inoculations, the men were sent to Basic Ground School and had to successfully complete 12 hours' instruction in Tiger Moths to qualify for flight training in one of the overseas schools.

To an English, Scottish or Welsh youth who had been selected for flight training in a flying school in far-off Arizona, this was high adventure. After an ocean voyage to Canada, five or six days on a train got the group of cadets to the Arizona desert, which to them must have seemed like the end of the world. The time away from England and

back usually took about nine months. Operational training was usually taken on return to the British Isles.

When the first cadets came to Arizona, the United States was, of course, still technically neutral. It was still prior to the Pearl Harbor attack. At first the Americans insisted that the British all had to wear civilian clothes. But Stuart Mills who was busily setting up the Falcon Field operation for the British, realized that discipline would be almost impossible unless British personnel were required to wear their uniforms. His pleas were heeded finally by the American authorities despite the fact that many Americans at that time were isolationist and anti-uniform.

Mills looked over the town of Mesa, which at the time was quite small. It had a bar, a furniture store, food store and a couple of service stations and not much more. He contacted the mayors and chiefs of police of not only Mesa but Phoenix and the other cities in the area. He wanted to be sure that when his fliers got into trouble the British would be allowed to discipline their own people. He also contacted the local newspapers asking them to print nothing about the training of British fliers until the first contingent had actually arrived. "I wanted no brass bands or dancing girls meeting the train when they pulled in," Mills said.

The British boys took well to the Southwest style of living. They loved the unaccustomed abundance of food, which was available to them. Ice cream, malts and cokes (many preferred to drink them warm, much to the disgust of the Americans) were consumed in huge quantities. In Britain, one egg a week was the norm, with six days taken to decide whether to fry, boil, scramble or poach it. In the states there was no rationing of any kind. They also learned to drink American beer and even bourbon whisky.

The families of Mesa, Tempe, Scottsdale and Phoenix took the British to their hearts. They took them into their homes and treated them like family. Organized by the squadron adjutant, the individual members of each class were "adopted" by Arizona families during their stay. When they went back to England, the next class was likewise distributed among willing Arizona families. Every boy was assured of a place to have Sunday dinner and a source of clean laundry. When, four years later, it was all over, the British Embassy made a special point to express their gratitude to the people of Arizona.

Not all cadets were without problems of morale and not all stories had happy endings. Stuart Mills remembers one in particular. His name was John and he was in one of the earlier courses. His father was in the Merchant Navy and his ship had been torpedoed in the South Atlantic. The boy was worried about his father and it affected his flying. The instructors, knowing his situation, tried their best and finally got him to his final check flight. He passed it with their help.

Two families had adopted John and alternated having him to their homes. He stayed weekends with them, played baseball and went horseback riding with them and wanted

to come back to Phoenix after the war to marry a local girl. He even borrowed money for an engagement ring.

After graduation he went into fighters and was recommended for a commission. His first posting was to the Middle East where his Tomahawk was shot down by an Me 109 and he was killed. It was a sad end to his Arizona odyssey. It was not the only tragic end to a Falcon Field flier.

There were fatal accidents at Falcon. Twenty-three cadets are buried in Mesa Cemetery testifying to the ultimate sacrifice some were called upon to make." One of the first was caused in a "go around" when the student raised the flaps instead of the gear. That was when American ground crews found out that the big fur collar on the RAF flight jacket burned like a torch.

Joe Wischler recalls one crash in particular. It was during the period when American and British cadets were training together. Two students were on a cross-country flight in an AT-6, one British and one American. They usually flew a triangular course and the practice was for the students to alternate the flying...one flying a leg, then the other.

The airplane was somewhere beyond the small town of Apache Junction (which is five to 10 miles east of the field) when they decided to see if they could get the T-6 to fly inverted. The craft wouldn't fly upside down for very long... the engine tended to quit, so they used the wobble pump to keep it going. To keep the nose up when inverted they cranked in full nose-down trim. It was surmised that after trying this (plus what was heard in the radio room) they gave up the effort.

It was deduced that instead of rolling out, they tried to split S out of inverted, but because of the trim, the airplane only did half of the split S. Wischler says no force in the world is going to pull out an AT-6 with full nose-down trim. If they had remembered to retrim it would have been okay, but they didn't. The airplane went straight in.

"We searched for them for a week with no success. We flew grids over the desert every day but no luck. Finally, one day a shepherd called us. He had seen the crash. He was out in the desert with the flock with no way to contact us. When he was finally picked up and brought in - he usually stayed out with the flock for a week at a time--he called us.

"Mike Foydl (Falcon chief pilot) and I jumped into a Stearman and flew out to the area described and started flying grids. The Stearman was good in searches because it could fly well at low speeds."

Finally Wischler noticed an area where the flat gray brown of the desert was a little darker brown in one spot. He wiggled the stick to get Foydl's attention and Mike banked the airplane and they circled the spot. The sun reflected off of metal and they knew they had found the plane.

The flew back to Falcon and a search party was sent out to the area. The aircraft had flown straight in...probably at about 300 mph. They separated everything that was in khaki from that which was in RAF blue and put them in two rubber bags. Then the wreckage was covered over with dirt.

Many of the accidents were the result of night-flying operations. The desert at night, with no moon, is just about as black as anything can get. Many fliers simply became disoriented and flew into the ground.

Sometimes aircraft, because of mechanical problems, made forced landings far from the base. One in particular was an AT-6 that had run out of fuel and bellied into a dry riverbed some miles from the field. A crew was sent out to recover the aircraft along with one of the instructors who had volunteered to fly it out if possible. They took along a set of tires, a prop and fuel with them to service the airplane. A portable "A" frame called "The Gallows" was used to raise the aircraft. The flaps were wired in the up position and the gear locked in the down position. Many hours were spent chopping willows to provide a takeoff path. Some distance from the airplane the river curved and at that point there was a partially buried log. Finally the engine was started and the pilot signaled that he was ready.

With the engine roaring many hands combined to get the T-6 rolling and in a blinding sandstorm the aircraft started down the cleared riverbed. Finally the crew fell away and the airplane rocketed toward the point of no return. Everyone knew it was never going to make it. The soft sand was too much for it. Finally at the critical moment the airplane hit half-buried log and lurched into the air. By some miracle the pilot kept it airborne and the airplane climbed out. Marvin Meier and Joe Wischler were in the maintenance crew and they remember the "damnedest buzz job" they had ever seen. "He was so happy that he wasn't dead that he just couldn't contain himself."

Retrieving downed aircraft and scraping up wrecks were just part of the job for flight and maintenance crews at Falcon Field. They were also required to go on cross-country flights, sometimes as far away as Texas. This would be done at the end of an advanced class when a group of students would fly their AT-6s, taking off two minutes apart to a common destination. Maintenance crews with toolboxes, sets of spark plugs and other parts would follow along, doctoring sick engines, changing flat tires and repairing bent wingtips.

Working at Thunderbird or Falcon usually meant a draft deferment. Maintenance people were warned not to quit if they wished to retain their deferment and many fretted under the veiled threat because, as jobs for skilled people were plentiful, they could probably have made more money on the West Coast working in shipyards or aircraft factories. Mechanics for Southwest were paid \$1 to \$1.25 per hour. Instructors, who made around \$500 per month, were likewise warned about changing jobs and if one was fired for cause, other training fields were notified and he would be blackballed for 90 days. During this time there was a good chance he would be drafted, as he was not employed in an essential industry. Ironically, many flight and maintenance people who faithfully

stuck it out, were later drafted when, towards the end of the war, the fields closed. Many of them served in the armies of occupation in Germany and Japan.

An instructor might be fired for a serious breach of conduct or even a sophomoric prank. One case of the latter happened like this. One day, just to relieve the monotony of training or just out of pure devilment, two instructors in Stearmans, with students decided to have a dogfight (which they were not supposed to be doing at that stage of training). Along came an AT-6 that started to circle the mock battle. As the T-6 made a lazy pass, the pilots of the Stearmans waved ... inviting him to join the fun. Then (and this was probably what really did it) the student in one Stearman unhooked his safety belt, stood up in the rear cockpit and as the AT-6 passed by, pointed his two forefingers at it and "Tic, tic, tic, tic, tic." Flying the AT-6 was the commanding officer! They still didn't know who it was until they got back to the field. The CO was standing there waiting for them. The students were reprimanded and the instructors fired on the spot ... and then blackballed from other training fields." It tended to make people stay where they were.

In addition to staying where they were, mechanics had to join the Air Corps Enlisted Reserve and pilots were also members of the Army Air Corps Reserve as second lieutenants. At one point, pilots were issued quasi-military uniforms and wings, and for a while were required to learn the manual of arms and spent some of their spare time learning to march under the watchful eye of an Army drill instructor. When a near mutiny erupted, the program was dropped by the AAF. This and other training fields were essential to the war effort and the government did not choose to tamper with success.

James Mitchell is a kindly, soft-spoken man who today is in his mid-70's. Known as Jimmy to his friends, Mitchell was both a mechanic and flight instructor at Falcon Field. He soloed in a Curtiss Jenny in 1927 and was awarded his A&P mechanic's license (then called A&E) in 1930. He and his brother Ted knocked around in aviation, working in the Midwest and finally California where Jimmy worked at Cal-Aero on BT-13s and AT-6s. In October of 1941 he came to Arizona to work for Southwest Airways as a mechanic.

His background in aviation became known and Mitchell was urged by the company to put aside his beloved toolbox and become a flight instructor. Pilots were hard to come by, so, with reservation, Jimmy made the switch. "They really didn't like the way I flew or the way I taught, but they agreed to take me on as instructor." Jimmie's approach to instruction was not always the accepted way but it usually brought the desired results. He instructed three or four classes, then asked to be put back in maintenance where he was made foreman.

While he was instructor he had a chance to evaluate the British student pilots. "Those kids had guts, especially in the formation and night-flying requirements in primary. It took skill and courage." Mitchell especially remembers one student. He was making his nighttime solo circuit of the field and was to land by the light of the flare path. It was a dark moonless night and the student lined up his approach to a "glide instructor" which

was on the ground. If he was too high he saw an amber light, if too low, a red, and if just right he saw a green light.

"The kid came in, getting lower and lower, seemingly ignoring the glide indicator," Mitchell remembers. "Everybody was point red lights at him but he landed about a hundred feet outside of the field anyway. It was a nice landing but there was a concrete irrigation ditch which he hit and the Stearman did a somersault, ending on its back with the student hanging upside down by his seat belt."

When they got to the airplane he was lowered to the ground, dusted off and asked if he was hurt. His eyes were big and round as he said, "No, sir, but I wouldn't recommend anyone else doing that." The ground crew and pilots that were gathered around tried to hide their smiles from the shaken cadet.

"But he wasn't washed out for that crash," Mitchell recalls. "I never did wash out a cadet. They had come so far and tried so dammed hard that we did everything to avoid it. If a kid didn't seem to be progressing or had a personality clash with the instructor he would be changed to another one. Usually he improved and thing worked out."

Sometimes serious accidents were the result of poor flying, but sometimes they were a result of a very small mistake. One cadet was on a solo night cross-country in an AT-6. Usually the altimeter was set at zero for Falcon Field's elevation, but when on a cross-country it was set for sea level. On his way in he called the tower and said he was at the three-mile limit and was starting to let down to 1000 feet. When he got to 1000 indicated he hit the ground. The airplane hit about 100 feet from a farmhouse, tearing off both wings and ripping up the fuselage. Incredibly, though people were awake in the house... playing cards, infact no one heard the crash.

A search was initiated immediately. Some flying around was done, but it was dark and the plane was not found. The next morning one of the search planes flew over and spotted the cadet, lying on his parachute waving at them. He died that day, a victim of his injuries and exposure. It was winter and the desert was freezing cold that night.

Jimmy Mitchell's voice is still bitter as he recalls the episode. "The kid had lain on his parachute all busted up the whole night. He would have survived if he'd been picked up.

Those people playing cards in that house didn't hear that airplane tearing itself to pieces. They went to bed and the next morning there it was... a hundred feet from the back of the house." From then on all altimeters (both Stearman and AT-6) were set at sea level, not zeroed out at field altitude.

One of the requirements in the primary segment of instruction was an air start of a dead engine in a Stearman. This was usually done near an emergency strip northwest of the field. The cadets got a kick out of doing it, according to Jim Mitchell. The aircraft was usually taken to about 5000 or 6000 feet where the fuel and ignition were turned off. (The mixture controls were blocked.) If the engine had good compression the prop

would stop reasonably quickly. If not, you might hit rough air and it would start spinning again. Sometimes it could take 2000 or 3000 feet stopping the prop. Then a clearing turn was made, the fuel and ignition turned on and the nose was pointed straight down until the prop started to windmill and the engine, hopefully, started.

You were supposed to plan it so that if, for some reason, the engine didn't restart the aircraft could be landed on the auxiliary strip. The engine almost always restarted in the air. One exception was an instructor who landed in the desert a half mile short of the strip. He restarted the engine on the ground and taxied the airplane across the rough terrain to the strip and calmly took off for Falcon, the fabric on the undersides of the wings in tatters. Landing at Falcon with torn fabric and broken wing ribs, he was asked to explain why he had done it. "If you think I'm going to walk a half a mile in that hot desert to get an auxiliary field...you're wrong. I rode." Needless to say, he didn't fly at Falcon again.

It goes without saying the adventures and misadventures in the training of thousands of cadets are myriad. Falcon Field had its share, but the operation as a whole worked remarkably well. From September 1941 until November 1945 many hundreds of RAF and American cadets received their wings at Falcon.

Fate had one trick to play on flight and maintenance crews yet. In August 1945 a destructive windstorm descended on the field and destroyed or damaged every Stearman on the field. Within two months every airplane had been replaced with a new aircraft. A month later the field closed.

The last classes were finished and the cadets, now pilots, along with their officers started the long trip back to England. Eighteen courses had gone through Falcon. Ironically, some of the later British pilots, because of the diminishing needs of the RAF toward the end of the war, were assigned as glider pilots in the operation "Crossing of the Rhine." Several were killed in their first effort against the enemy.

CONCLUSION

Falcon Field closed in November 1945. The field was turned over to the city of Mesa for one dollar. Thunderbird II had closed earlier in October 1944 and Thunderbird I had closed in June 1945. Southwest Airway had embarked upon a mighty effort and it had been an unqualified success. From a small training operation at a sleepy little airport, it had grown to a vast training complex with four fields. Records indicate that over 20,000 fliers had been graduated from the fields and they had flown over a million-and-a-quarter training hours. In addition, the engine and airframe overhaul facility also had been extremely successful, making the whole operation work by providing the hardware where and when it was needed. It took a lot of effort to provide backup for almost 500 aircraft.

Statistics really only tell part of the story...over a million flight hours, almost five million landings and takeoffs, twenty million gallons of gas burned and all those cadets trained

to be pilots. The whole thing had been accomplished with flair, style and imagination. Morale, efficiency and motivation had never been found wanting. The results achieved were far and away in excess of anything the Air Force had originally envisioned.

When the last field closed there was a vacuum...a terrible letdown. But then the word came out. Southwest Airways had applied for a permit to operate a local service airline on the West Coast. Pilots and maintenance crews would be needed. The war was over and there was a new challenge. Everyone looked forward to the postwar era of prosperity and the good life. Move on and don't look back.

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ABOUT THE AUTHOR

Charles Hyer, a native of San Francisco, has been an aviation enthusiast and aeromodeler since his teens. He joined Southwest Airways as a junior mechanic after the training fields had been closed and the company had embarked on its airline operations. Hyer knew John Connelly and at one time helped negotiate a union contract for the mechanics with Leland Haway sitting on the company's side of the table. He has recently (1984) retired after 37 years of service with Republic Airlines and its predecessor airlines, Southwest, Pacific Airlines and Hughes Airwest.

He is a member of AAHS and has done several drawings of Air Corps pursuit group color schemes for the Journal. At the present time he is doing research on the Curtiss P-36 in the Air Corps service and would appreciate correspondence from Society members who have information on the subject.